

Vermont EV Future

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Vermont Adopted California Advanced Clean Cars II

- Follows California's aggressive path of Zero Emission Vehicles (ZEV) adoption
- Requires all new vehicle sales to be ZEVs by 2035

3 Types of ZEV

PHEV

- **Plug-In Hybrid Electric Vehicles (PHEVs): XC60 T8, RAV4 Prime)**



BEV

- **Battery Electric Vehicles (BEVs): LEAF, Bolt, ID.4, F150, C40)**

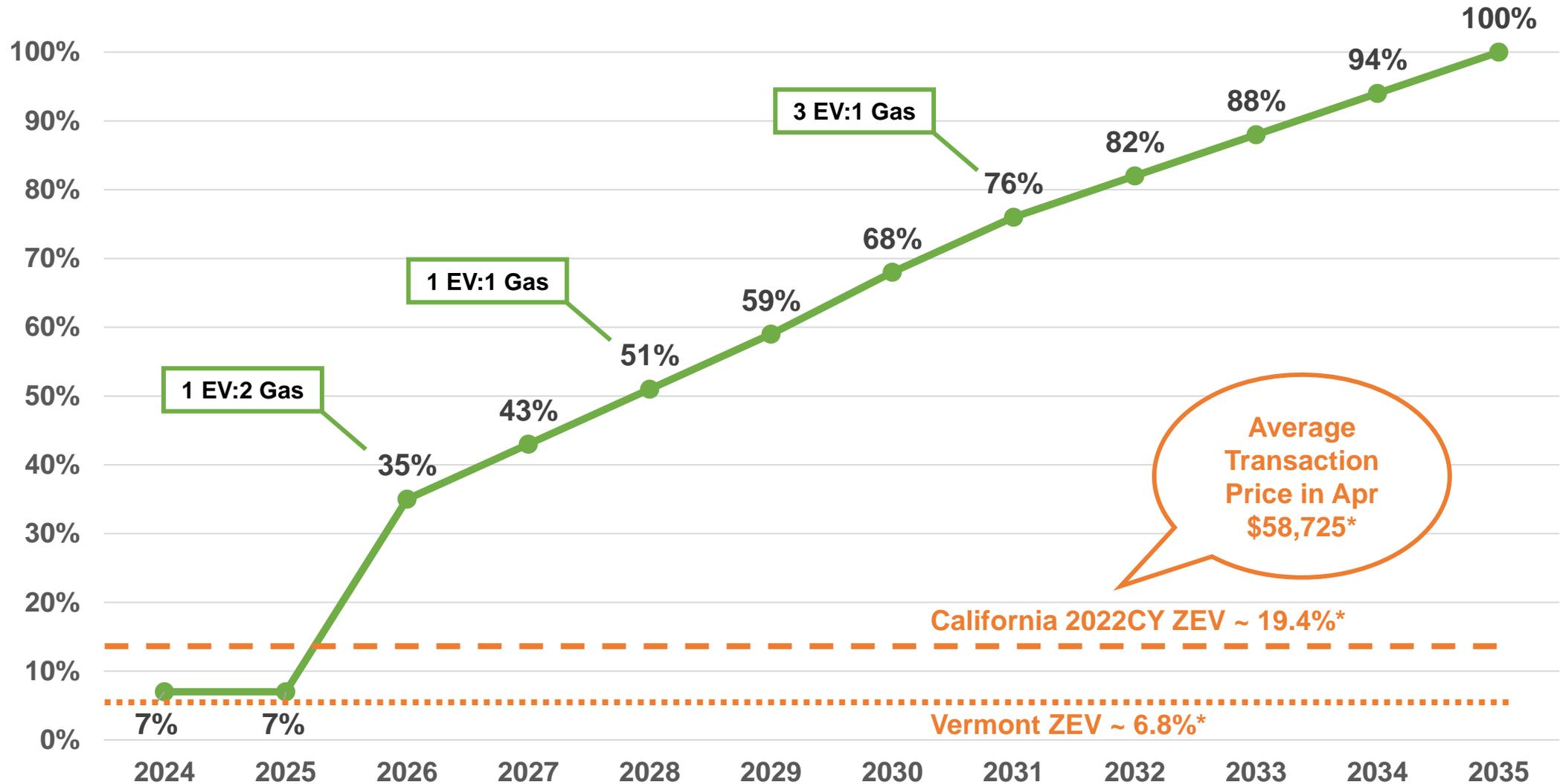


FCEV

- **Hydrogen Fuel Cell Electric Vehicles (FCEVs): Mirai, Nexo)**



California ACC II – ZEV Mandate



Excellent Start

Public EV Charging Network in Vermont



EV charging stations in Vermont: **358**

Vermont is #1

State has higher number of public chargers per capita than any other state in the U.S. (114 charging ports per 100,000 people*)

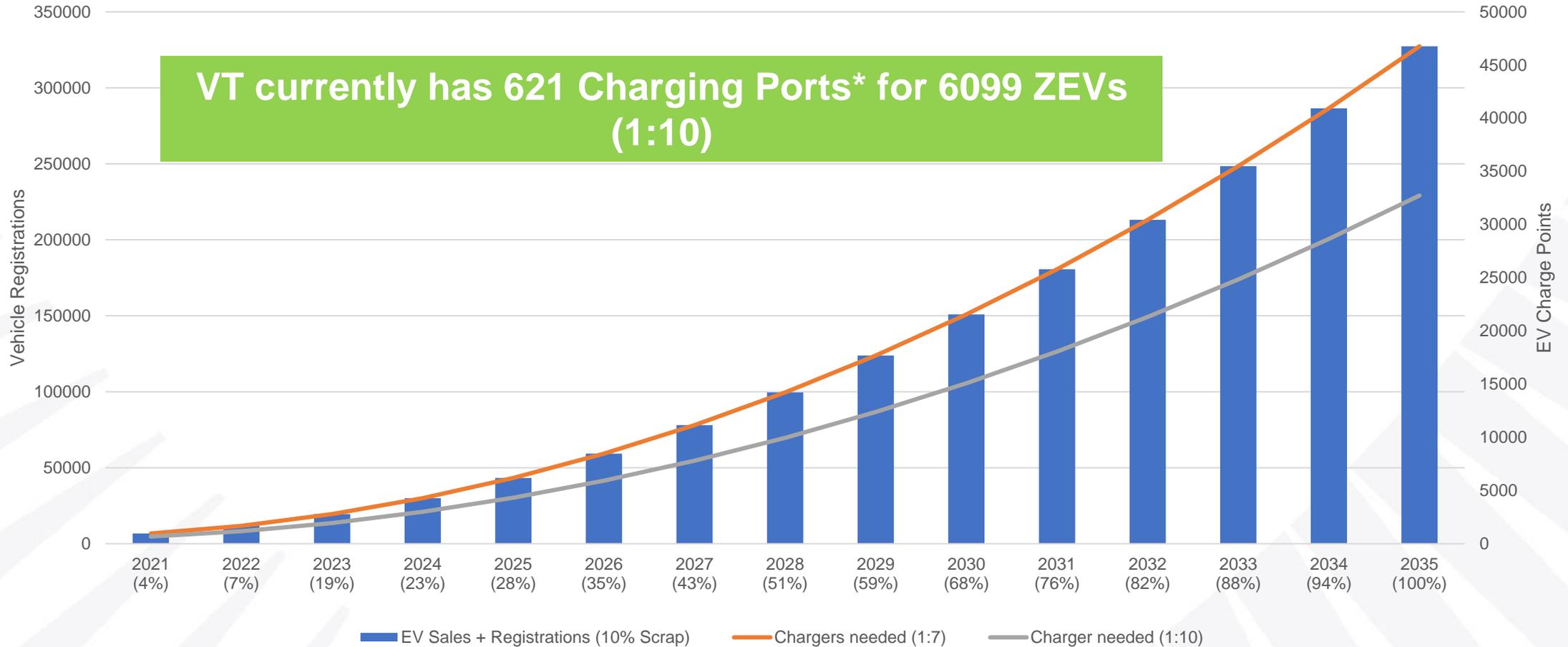
LEGISLATURE PASSED VERMONT'S LARGEST-EVER TRANSPORTATION BILL INTO LAW

- **H. 736 Dedicates More Than \$868 Million to State Transportation Infrastructure and Programs**

- **\$36.25 million to continue implementing programs that reduce carbon emissions from the transportation sector by investing million across multiple efforts:**
 - \$6.25 million for electric vehicle (EV) fast charging on the highway network.
 - \$10 million for EV charging for multi-family dwellings, workplaces and community attractions.
 - \$14 million for a new EV incentive program and programmatic support from Drive Electric VT.
 - \$3 million for the Mileage Smart Incentive program for used EVs and Highly Efficient Vehicles (HEVs).
 - \$3 million for Replace Your Ride Incentive program for efficient transportation.
 - An updated goal of installing EV fast charging infrastructure within one mile of each interstate exit and every 25 miles along state highways.

State of Vermont Charging Infrastructure

VT EV Growth (ACCII) + EV Charge Ports required



• Public charging is typically more than 4X more expensive than home charging

Cost to charge and EV

- To calculate the cost to fully charge an electric vehicle, multiply the cost per kilowatt-hour with the battery's maximum capacity
- **Chevy Bolt Example:**
 - At Home charging:
 - Battery size = 66 kWh
 - Average Vermont household rate is \$0.1701/kWh
 - Cost = $66 \times 0.1701 = \$11.23$
 - Public DC fast charging:
 - Battery size = 66 kWh
 - Average public charging rate is \$0.6329/kWh
 - Cost = $66 \times 0.6329 = \$41.77$

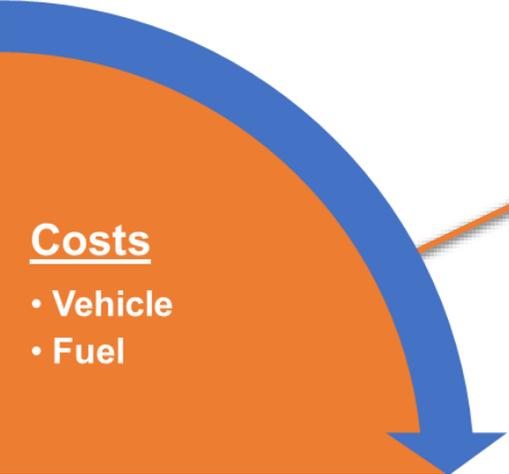
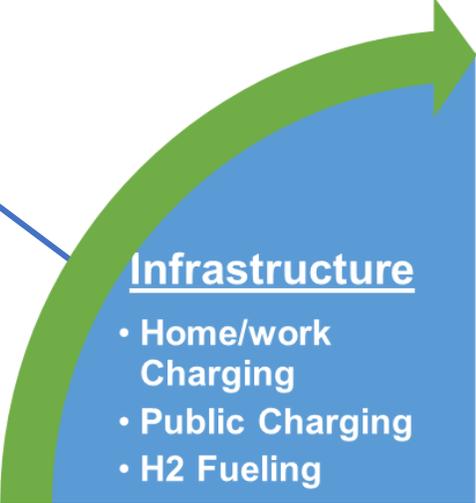
88% of EV Charging occurs at Home*



Almost 4X more expensive to fast charge publically

Market Feasibility

- Convenient, easy to use, everywhere
- Top reason to reject an EV “Nowhere to Charge”



- EVs still more expensive than gas - Incentives help bridge the gap
- Charging must be cheaper than gas

- Consumers must know and trust the technology
- Buy-in from all drivers



- Automakers investing \$1.2 trillion by 2030
- Building a new global supply chain from scratch, hundreds of factories.

Path to a successful EV growth in Vermont

- Ensuring low- to moderate-income (LMI) and multi-family housing (MFD) residents have the identical access to low-cost, convenient, and reliable level 2 (L2) home charging that single-family homeowners enjoy.
- Adopting private and public state fleet requirements equivalent to or greater than the requirements in ACC II
- Deploying convenient, reliable and affordable access to public EV charging and hydrogen refueling stations, as well as monitoring to ensure reliability and low power rates.
- Installing 350kW DCFC near highways and airports
 - Also consider installing hydrogen (H2) charging at airports
- Adopting building codes addressing new construction and retrofit requirements for EV-ready residential and commercial parking.
- Ensuring grid resiliency and utility electric rates that provide low-cost EV charging.
- We support the increasing of the tax credit for EVs through 2028 as well as funding any state-level point-of-sale EV rebates.



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